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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOSEPH A. KING and MARTIN ROBERT EDELSON

Appeal 2008-2388
Application 10/623,682
Technology Center 1700

Decided: June 20, 2008

Before CATHERINE Q. TIMM, ROMULO H. DELMENDO, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 8-10 and 12 (Final Office Action entered August 11, 2006). Claims 11 and 13-20, the only other pending claims, have been withdrawn from consideration. We have jurisdiction under 35 U.S.C. § 6(b).

WE AFFIRM.

Appellants' invention relates to methods of manufacturing an article for use in water purification using a water treatment composition comprised of a metal ion yielding material. The water treatment composition comprising a metal ion yielding material is attached to a structure by an adhesive, and then the structure is formed "into an article that can be placed in a body of water to maintain the proper metal ion concentration therein." (Spec. 3, ll. 24-27).

Representative claims 8 and 10 read as follows:

8. A method of applying a water treatment composition to an article comprising the steps of:
a) applying an adhesive to a web of material;
b) applying a metal ion yielding material in particle form to the adhesive on the web;
c) allowing the adhesive to dry to secure the metal ion yielding material to the web of material; and
d) forming the particle containing web into an article for use in water purification.

10. A method of making an article for insitu water treatment comprising the steps of:
selecting a water treatment material from the group consisting of zinc sulfate, zinc carbonate, zinc chloride, copper chloride, copper carbonate, copper sulfate, silver chloride, stannous chloride and stannic chloride;
selecting an adhesive from the group consisting of polyurethane, epoxy resin, polyvinyl acetate and polyvinyl alcohol;
selecting a water insoluble solid structure;
applying the adhesive to the water insoluble solid structure to form at least a partial coating thereon;
applying the water treatment material to the adhesive on said solid structure;

allowing the adhesive to set to thereby secure the water treatment material to the solid structure; and forming the structure into an article for placement into a body of water to thereby enable the structure to adhesively support the water treatment material thereon in a condition that maintains a water concentration of metal ions less than 1000 parts per billion (ppb).

The prior art references relied upon by the Examiner to reject the claims on appeal are:

Minami	US 3,866,568	Feb. 18, 1975
Yoshida ¹	JP 51-67462	Jun. 11, 1976
Mioda ²	JP 78-010390	Apr. 13, 1978
Mioda ³	JP 78-020780	Jun. 28, 1978
Young	US 4,152,272	May 01, 1979
Jong ⁴	KR 89-002848	Aug. 05, 1989
Hayashi	JP 01301291 A	Dec. 05, 1989
Takahashi	US 5,567,539	Oct. 22, 1996
Oehler	US 5,820,927	Oct. 18, 1998
Rouse	US 6,238,448 B1	May 29, 2001
Rosenblatt	US 6,365,169 B1	Apr. 02, 2002

The following rejections are before us for review:

Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Jong, with Minami and Takahashi cited as extrinsic evidence to establish a state of fact.⁵

¹ In the Evidence Relied Upon section of the Examiner Answer, the Examiner refers to this reference as Japan Vilene Co. Ltd.

² Mioda '390 is referred to as JP 78-010390 in the Examiner Answer, Appeal Brief, and Reply Brief.

³ Mioda '780 is referred to as JP 78-020780 in the Examiner Answer, Appeal Brief, and Reply Brief.

⁴ Jong is referred to as KR 89-002848 in the Examiner Answer, Appeal Brief, and Reply Brief. The inventor's name is alternatively identified as Jung in Appellants' translation of KR 89-002848.

Claims 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being obvious in view of Mioda, JP 78-010390 (hereinafter Mioda ‘390).

Claims 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being obvious in view of Mioda, JP 78-020780 (hereinafter Mioda ‘780).

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Jong and Oehler.

Claims 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Jong, Mioda ‘390, Mioda ‘780, and Rosenblatt.

ISSUES

Have Appellants shown that the Examiner reversibly erred in determining that the subject matter of claims 8-10 is anticipated by, or in the alternative, would have been obvious to one of ordinary skill in the art in view of either Mioda ‘390 or Mioda ‘780?

Have Appellants shown reversible error in the Examiner’s determination that the subject matter of claims 8 and 9 is anticipated by Jong, or would have been obvious in view of Jong and Oehler?

Have Appellants shown that the Examiner reversibly erred in determining that the subject matter of claims 8-10 and 12 would have been

⁵ “[E]xtrinsic evidence may be considered when it is used to explain, but not expand, the meaning of a reference.” *In re Baxter Travenol Laboratories*, 952 F.2d 388, 390 (Fed. Cir. 1991).

obvious to one of ordinary skill in the art over the combined teachings of Jong, Mioda '390, Mioda '780, and Rosenblatt?

FINDINGS OF FACT

1. Jong teaches a method of making a sterilization filter where “a silver-added activated carbon 12' and an untreated activated carbon 12" are alternately arranged between upper and lower non-woven fabrics 11' and 11".” (P. 4, ll. 17-19).
2. Jong discloses that “[w]hen forming the filter 8, one side of the non-woven fabrics 11' and 11" is coated with an adhesive, and the adhesive-coated side is fusion-bonded to the activated carbon to fix the activated carbon.” (P. 4, ll. 20-22; Fig. 3).
3. The Examiner found that hot melt adhesives require fusion bonding. (Ans. 10, l. 10).
4. Mioda '390 discloses a method of making a sterilizing element for a water purification vessel involving coating a flexible resin substrate with a resin adhesive agent, applying a water-insoluble silver salt on the adhesive agent, then hardening the adhesive to adhere the silver salt to the flexible resin substrate. (P. 9, ll. 1-23).
5. In their Specification, Appellants disclose the use of rollers to move the inventive web through processing steps. (Figs. 1-3, 5, and 6).
6. The Examiner states the dictionary definition of “‘solid’ means a structure of *uniformly close and coherent texture*.” (Final Action 5, ll. 9-11; Merriam-Webster’s Collegiate Dictionary, 10th Ed.).
7. Mioda '390’s disclosure of manufacturing an article for placing into water by inserting a sterilization device (comprised of a substrate with

adhering silver-salt particles) into a part of a support frame involves “forming” an article by constructing the finished article with the substrate. (P. 7, ll. 6-10).

8. Mioda ‘780 discloses a method of manufacturing a sterilization device for a water purification apparatus where “a silver salt used as disinfectant is mixed with glass and formed into a sintered-compact powder, and this sintered-compact powder is bonded to a substrate with a resin adhesive.” (P. 10, l. 6 through p. 11, l. 1).

9. Mioda ‘780 teaches adding pulverized glass/silver salt powder to an epoxy resin to form an enamel, and the enamel “is printed on a substrate comprised of Mylar film and baked at 100 °C for 2 hours.” (P. 9, ll. 2-9).

10. The Examiner found that “‘adhering’ involves ‘drying’ whether the adhesive is hot-melt adhesive, or solvent based.” (Ans. 5, ll. 19-20).

11. Oehler discloses that after contacting activated carbon with the adhesive layer, the “foam support body 20 is then air dried, typically at room temperature, to evaporate remaining solvent and contract the foam support body 20 back to substantially its original volume resulting in a firm adhesive and mechanical bonding of the activated carbon particles 30 to the foam support body 20.” (Col. 4, ll. 40-44, Figs. 1, 2).

PRINCIPLES OF LAW

“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997).

A claimed invention is unpatentable if the differences between it and the prior art are “such that the subject matter as a whole would

have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103(a)(2000).

“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1734 (2007) (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966)).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 127 S. Ct. at 1739.

ANALYSIS

Appellants contest the grounds of rejections by submitting separate arguments and raising specific issues in each ground of rejection. We consider these separate arguments made with respect to each ground of rejection. Nevertheless, in each ground of rejection, arguments not made by Appellants are waived. 37 C.F.R. § 41.37 (c)(1)(vii) .

Claims 8 and 9 Rejected as Anticipated by Jong.

Appellants group claims 8 and 9 together, submitting specific arguments directed to claim 8, and do not argue the separate patentability of claim 9 apart from claim 8. (App. Br. 6-10; Reply Br. 5-10).

The Examiner found that Jong teaches “applying an adhesive to the inner side of permeable upper and lower nonwoven fabrics” and loading “silver treated activated carbon” and “untreated activated carbon *alternately* between the upper and lower nonwoven fabrics.” (Ans. 4, ll. 15-22; FF 1).

Appellants do not dispute these findings. (App. Br. 6-10; Reply Br. 5-10). Rather, Appellants assert that Jong does not disclose the “step of applying of metal ion yielding material in particle form *to the adhesive*.” (App. Br. 9, ll. 11-12). Appellants also contend that Jong is unclear as to the “use and function of the adhesive” and that “the mere disclosure of an adhesive coating the inner side of the nonwoven fabric *is not sufficient* to lead to the conclusion that the silver-added active carbon and untreated active carbon of [Jong] are actually applied to the adhesive.” (*Id.* 8, ll. 9-17). Appellants continue that “it is more likely that [Jong] teaches that the activated carbons are fusion bonded to the non-woven fabric itself and not to the adhesive as the generally adhesion properties of an adhesive would alleviate the need for fusion bonding.” (*Id.* 9, ll. 15-17). While acknowledging that Jong discloses “the inner side of the nonwoven fabric is coated with adhesive,” Appellants contend that this adhesive is to bond the upper and lower sheets of fabric to prevent blistering. (*Id.* 9, l. 20 through 10, l. 1). Finally, Appellants argue that Jong teaches away from the use of an adhesive to secure the silver-added active carbon and untreated active carbon to fabrics 11' and 11'". (*Id.* 10, ll. 2-4). In this regard, Appellants contend that since the fabrics in Jong's invention have a mesh finer than the activated carbon loaded between the fabrics, “there lacks a need for securement of the silver-added active carbon and untreated carbon” because

the fabrics “already function[] to prevent the silver-added active carbon and untreated active carbon from escaping or releasing.” (*Id.* 10, ll. 7-13).

These speculative arguments are unpersuasive in light of Jong’s explicit disclosure that the activated carbon is fixed to the adhesive. (FF 2). In view of the clear teaching in the prior art, we find Appellants’ arguments unpersuasive to show the Examiner erred. For these reasons, we find Appellants’ arguments not sufficient to show that the Examiner erred in finding the claims anticipated by Jong.

We need not discuss Minami and Takahashi for this ground of rejection because such a discussion is unnecessary to decide the issue raised on appeal.

Claims 8-10 Rejected As Anticipated or, Alternatively, as Obvious in View of Mioda ‘390.

The Examiner found that Mioda ‘390 discloses every limitation of claims 8-10. (Ans. 4, l. 28 through 5, l. 13, FF 4).

Anticipation of Claims 8 and 9.

Appellants assert that Mioda ‘390 does not teach “the step of applying an adhesive to a web of material, the step of applying a metal ion yielding material in particle form to the adhesive on the web, or the step of forming the particle containing web into an article.” (App. Br. 12, ll. 8-11). Specifically, Appellants argue that the substrate disclosed by Mioda ‘390 is flexible, that a flexible substrate “is not a web of material,” (*Id.* 11, ll. 26 through 12, l. 2), and that Mioda ‘390’s adhesive and flexible substrate are secured to a “meshed porous resin frame [that] supports [the] flexible substrate.” (*Id.* 12, ll. 2-6).

We do not find Appellants' arguments persuasive. Appellants have not relied on any persuasive documentary evidence to show that a web excludes a flexible substrate, or that one of ordinary skill in the art would think forming a "web" into an article is limited so as to exclude supporting a flexible substrate on a frame. *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) ("Attorney's argument in a brief cannot take the place of evidence."). In a manner inconsistent with their arguments, Appellants' Specification describes the use of rollers to move the inventive web through processing steps. (FF 5). From this disclosure, it would reasonably appear that a web needs to be flexible to be able to move on the rollers. Furthermore, we find that Mioda '390's disclosure of securing a substrate to a support frame to manufacture an article for placing into water involves "forming" the web into an article by constructing the finished article with the substrate. (FF 7). That is, attaching the web substrate to another structure "forms" the finished article. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) ("During examination, 'claims . . . are to be given their broadest reasonable interpretation consistent with the specification.'"). For these reasons, we find that Appellants have not shown that the Examiner erred in determining claims 8 and 9 anticipated by Mioda '390.

Regarding claim 9, Appellants rely on the same arguments as presented with claim 8 for patentability. (App. Br. 11-12; Reply Br. 11, ll. 1-17). Again, for the same reasons as discussed above, we find the Appellants have not persuasively shown the Examiner erred in rejecting claim 9 as anticipated by Mioda '390.

Anticipation of Claim 10.

Appellants argue that Mioda '390 does not disclose the claimed steps of "...applying the adhesive to the water insoluble *solid* structure..." or the step of "...forming the structure into an article for placement into a body of water...." (App. Br. 13, ll. 3-6). Here, Appellants contend that the flexible substrate disclosed by Mioda '390 "*is not a solid structure.*" (*Id.* 13, l. 8).

In referring to the dictionary definition of "solid," the Examiner states that the term "'solid' means a structure of *uniformly close and coherent texture.*" (FF 6). Taking into account the ordinary meaning of "solid," we detect no error in the Examiner's determination that the prior art flexible substrate is a "solid structure." Here again, Appellants arguments are not persuasive because Appellants have not relied on any convincing documentary evidence to satisfy their burden to show that the claimed "solid structure" distinguishes from the prior art flexible substrate. As to "forming," the prior art discloses the structure is "formed" into an article when attached to a support frame. (FF 4, 7).

Appellants' argument regarding the prior art role of "AgCl as the water insoluble solid structure" misinterprets the Examiner's findings. (Reply Br. 11, l. 25 through 12, l. 6). The prior art teaches adhering AgCl to a flexible substrate (i.e., a water insoluble solid structure), then inserting the substrate into a frame. (Ans. 4 l. 28 through 5, l. 13; FF 4, FF 7). The limitation of "a water insoluble solid structure," required by claim 10, is clearly met by the prior art flexible substrate.

For these reasons, Appellants have not shown the Examiner erred in finding claim 10 anticipated by Mioda '390.

Obviousness of Claims 8-10.

In view of our determination that the Examiner correctly rejected claims 8-10 under 35 U.S.C. § 102, the rejections under 103 are affirmed. *In re Fracalossi*, 681 F.2d 792, 794 (CCPA 1982) (“[E]vidence establishing lack of all novelty in the claimed invention necessarily evidences obviousness.”).

Claims 8 and 9 Rejected As Anticipated or, Alternatively, as Obvious in View of Mioda ‘780.

Anticipation of Claims 8 and 9.

The Examiner asserts that Mioda ‘780 discloses “a sterilizing element for water purification apparatus (claimed filter) comprising adhering a water-insoluble silver salt containing powder to a flexible film with a epoxy resin binder.” (Ans. 5, ll. 16-18; FF 8). Furthermore, the Examiner alleges that “‘adhering’ involves ‘drying’ whether the adhesive is hot-melt adhesive, or solvent based.” (Ans. 5, ll. 19-20; FF 10).

Appellants contest the Examiner’s finding that “‘adhering’ involves ‘drying’” and argue that “[a]lthough an adhesive can adhere through a drying process . . . *an adhesive can also adhere without having to dry.*” (App. Br. 14, ll. 20-24). Furthermore, Appellants refer to the dictionary meaning of “dry,” and assert “the term ‘dry’ involves the removal of moisture or being free of moisture.” (*Id.* 16, ll. 6-7). In addition, Appellants contend that neither the dictionary nor Appellants’ Specification supports the Examiner’s position that the term ‘dry’ is interchangeable with the term ‘cure’ or ‘cured.’” (*Id.* 15, ll. 8-10 and 16, ll. 8-9).

We agree with Appellants. As Appellants' Specification does not define the term "dry," we look to its common meaning. Though the Examiner submits evidence by citing to Minami, Takahashi, Colson, Hayashi, Yoshida, and Rouse (Ans. 3, l. 15 through 4, l.2); this evidence is insufficient to show that "adhering" necessarily involves "drying." The Examiner's evidence does not conclusively establish that "drying" occurs with solvent-free adhesives. Anticipation requires every limitation to be expressly or inherently shown in the prior art reference, and inherency requires that a feature necessarily is found in the prior art. Here, the prior art fails to explicitly state that the disclosed epoxy resin "dries," and the cited evidence does not establish that "adhering" in the prior art means "drying." *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997) ("To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently."). Thus, the Examiner erred in determining that claims 8 and 9 are anticipated by Mioda '780.

Obviousness of Claims 8 and 9.

The Examiner contends that "[e]ven if it could be argued that curing does not include drying . . . it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have used *solvent* based curable adhesive so that adhering would involve drying." (Ans. 5, ll. 21-23). We agree. In our view, a person having ordinary skill in the art would have found it obvious to use any suitable known adhesive, including solvent-based or solvent-free adhesives, to carry out the teachings of the prior art. *KSR*, 127 S. Ct. at 1739 ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."). Appellants do not specifically address the

Examiner's obviousness determination, but rely on the same arguments as submitted with respect to the anticipation rejection of the claims, as discussed above. (App. Br. 14-17). Here, Appellants have not met their burden to show that the Examiner reversibly erred in determining the use of solvent based curable adhesives would have been obvious to one of ordinary skill in the art in view of Mioda '780.

Claims 8 and 9 Rejected As Obvious in View of Jong and Oehler.

Appellants argue claims 8 and 9 together. We address the arguments accordingly.

Appellants contend that Oehler's teachings cannot be used to modify Jong's method of forming a purification filter. (App. Br. 18-19). Specifically, Appellants assert that Oehler teaches ethylene acetate is "use[d] to form an adhesive layer within the pores of Oehler et al.'s foam support body 20 in order to impregnate Oehler et al.'s granular particles 30 within the pores of Oehler et al.'s foam support body 20." (*Id.* 18, l. 25 through 19, l. 3; Oehler, Figs. 1, 2). According to Appellants, the references cannot be combined because Oehler discloses the particles to adhere within the pores, while Jong "calls for the mesh . . . fabrics as being finer than the activated carbon thereby preventing the activated carbon from passing through. If the activated carbon cannot pass through the mesh of [Jong's] fabrics . . . the impregnation of the activated carbon within [Jong's] fabrics [is prevented]." (App. Br. 19, ll. 5-7). Appellants also assert that "Oehler et al. does not teach the step of '... allowing the adhesive to dry to secure the metal ion yielding material to the web of material.'" (*Id.* 19, ll. 11-12). Rather,

Appellants argue, Oehler “calls for the drying of the foam support body . . . instead of for the drying of the adhesive.” (*Id.* 19, ll. 13-15).

We find Appellants’ arguments lacking persuasive merit. Oehler plainly discloses contacting activated carbon with the adhesive layer, where the “foam support body 20 is then air dried, typically at room temperature, to evaporate remaining solvent and contract the foam support body 20 back to substantially its original volume resulting in a firm adhesive and mechanical bonding of the activated carbon particles 30 to the foam support body 20.” (FF 11). This disclosure explicitly describes the claimed step of “allowing the adhesive to dry to secure the metal ion yielding material.” The presence of an additional mechanical bond, along with the adhesive bond, does not detract from Oehler’s teaching of drying the adhesive to secure the metal ion yielding material to the support body.

Furthermore, the Examiner found that Oehler teaches “that an adhesive solution of ethylene vinyl acetate is suitable for securing activated carbon to substrate in making water filters,” suggesting the combination of the methods disclosed in Jong and Oehler. (Ans. 14, ll. 21-23). The Examiner found a reasonable expectation of success in combining the prior art “because the adhesive properties of the ethylene vinyl acetate solution would not depend on intended use of the adhesive, i.e. the adhesive ethylene vinyl acetate solution would fix whether it is the surface of the pores of the substrate or the outer surface of the substrate.” (Ans. 14, ll. 24-28). Substituting ethylene vinyl acetate adhesive, as taught by Oehler, for the hot melt adhesive disclosed in Jong, to achieve predictable results would have been obvious. *KSR*, 127 S. Ct. at 1739 (“The combination of familiar elements according to known methods is likely to be obvious when it does

no more than yield predictable results.”). Appellants have not submitted any persuasive evidence that the use of ethylene vinyl acetate and solvent solution in the method of Jong would not function as predicted (i.e., to fix carbon particles to a substrate after drying).

Claims 8-10 and 12 Rejected As Obvious in View of Jong, Mioda ‘390, Mioda ‘780, and Rosenblatt.

Appellants argue claims 8-10 together and do not submit any specific arguments directed to the rejection of claim 12. We address Appellants’ arguments accordingly.

Here, Appellants do not argue the Examiner’s findings with respect to Jong, Mioda ‘390, or Mioda ‘780. (Reply Br. 13-15, App. Br. 20-22, FF 1-4, 7, 8). Rather, Appellants only challenge Rosenblatt’s teachings with respect to the claimed invention. Specifically, Appellants argue that “Rosenblatt does not call for the application of iodine . . . in particle form,” (App. Br. 21, ll. 9-10), and that “Rosenblatt does not call for the drying or curing of his PVA with the iodine applied thereto in order to secure the iodine to Rosenblatt’s substrate.” (*Id.* 21, ll. 17-19).

We do not find Appellants’ arguments directed to Rosenblatt’s teachings sufficient to show that the Examiner erred in rejecting the claims as obvious in view of the combination of Jong, Mioda ‘390, Mioda ‘780, and Rosenblatt. As discussed above, claims 8-10 and 8-9 were determined to be obvious to one of ordinary skill in the art in view of Mioda ‘390 and Mioda ‘780, respectively. Consideration of the combined teachings of the references here does not nullify the obviousness determinations made above when considering the teachings of the prior art separately.

As discussed above, the Examiner found Mioda '390 discloses the application of AgCl particles to an epoxy resin adhesive on a substrate (FF 4), and determined that substituting a solvent based adhesive for the epoxy resin adhesive in the method disclosed by Mioda '390 would have been obvious. (Ans. 4, l. 28 through 5, l. 13). Here, the Examiner's findings with respect to Rosenblatt are cumulative to the teachings of Mioda '390 in meeting the limitations of "applying a metal ion yielding material in particle form," "allowing the adhesive to dry to secure the metal ion yielding material," and "allowing the adhesive to set to thereby secure the water treatment material to [a] solid structure," as required in claims 8-10. (Claims 8-10; App. Br. 20, ll. 7-15). Because the combined teachings of Jong, Mioda '390, and Mioda '780 disclose the claimed methods of claims 8-10, Appellants' arguments directed to the teachings of Rosenblatt are ineffective to rebut the Examiner's prima facie case of obviousness.

Regarding claim 12, the Examiner relied on Rosenblatt's teaching of applying an adhesive by spraying to determine the claim obvious to one of ordinary skill in the art. (Ans. 15, ll. 17-29). Appellants do not rely on any separate arguments to contest the Examiner's obviousness determination. Accordingly, we find that Appellants have not satisfied their burden to show that the Examiner reversibly erred in determining claim 12 obvious to one of ordinary skill in the art, in view of the combination of Jong, Mioda '390, Mioda '780, and Rosenblatt.

Claim 10 Rejected As Anticipated or, Alternatively, as Obvious in View of Mioda '780.

We turn first to the rejection of claim 10 under 35 U.S.C. § 102(b). Appellants' assert that Mioda '780 does not teach "appl[ing] an adhesive to a substrate *and then* a silver-salt-containing powder in order to expose the powder" (Emphasis added; App. Br. 23, ll. 23-25). In response, the Examiner argues that "patents are relevant as prior art for *all* they contain," and that [d]isclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments." (Ans. 16, ll. 9-16).

As directed by *In re Schreiber*, for a claim to be anticipated, the prior art must explicitly or inherently disclose every limitation of the claimed invention. Significantly, the Examiner does not identify a nonpreferred embodiment or broader disclosure from the prior art that explicitly or inherently teaches first applying adhesive, then the water treatment material. In view of Mioda '780's explicit disclosure that the powder and adhesive are applied simultaneously as an enamel (FF 9), the Examiner's position that Mioda '780's disclosure of exposing the silver-salt-containing powder in adhesive clearly describes "powder should be adhered to applied adhesive" (Ans. 7, l. 27 through 8, l. 1), is not tenable. In the absence of any explicit or inherent disclosure in Mioda'780 of methods of applying adhesive *and then* water treatment particles, we cannot agree with the Examiner's anticipation rejection.

We turn next to the Examiner's obviousness determination. The Examiner asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied an adhesive to a

substrate then a silver-salt-containing powder in [Mioda '780] with the expectation of providing the desired exposed powder.” (Ans. 8, ll. 1-4). The Examiner’s position is not well-reasoned. Here, the Examiner has not sufficiently explained why one of ordinary skill in the art would modify the prior art method of first forming an enamel of pulverized glass/silver salt and epoxy resin adhesive, then printing the enamel on a substrate to the claimed method of applying the adhesive to a substrate, then applying the pulverized glass/silver salt material to the adhesive. Moreover, the Examiner has provided no reasoning to show that separately applying the adhesive and pulverized glass/silver salt powder in sequence would even achieve the same result as simultaneously applying the treatment material and adhesive as an enamel. For these reasons, we cannot affirm.

CONCLUSION

In view of the above discussion, we do not sustain the rejections to claims 8, 9, and 10 made under 35 U.S.C § 102(b) in view of Mioda '780 or the rejection to claim 10 made under 35 U.S.C. § 103(a) in view of Mioda '780.

Appellants have failed to show the Examiner reversibly erred in finding claims 8 and 9 anticipated by Jong or claims 8, 9, and 10 anticipated by Mioda '390.

Appellants have failed to show that the Examiner reversibly erred in concluding that one of ordinary skill in the art would have found the subject matter of appealed claims 8-10 and 12 obvious over the prior art as follows: claims 8 and 9 in view of Mioda '390, Mioda '780, or in view of Jong and Oehler; claim 10 in view of Mioda '390 or in view of Jong, Mioda '390,

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Mioda '780, and Rosenblatt; and claim 12 in view of Jong, Mioda '390,
Mioda '780, and Rosenblatt.

Accordingly, the decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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